

FIG. 1

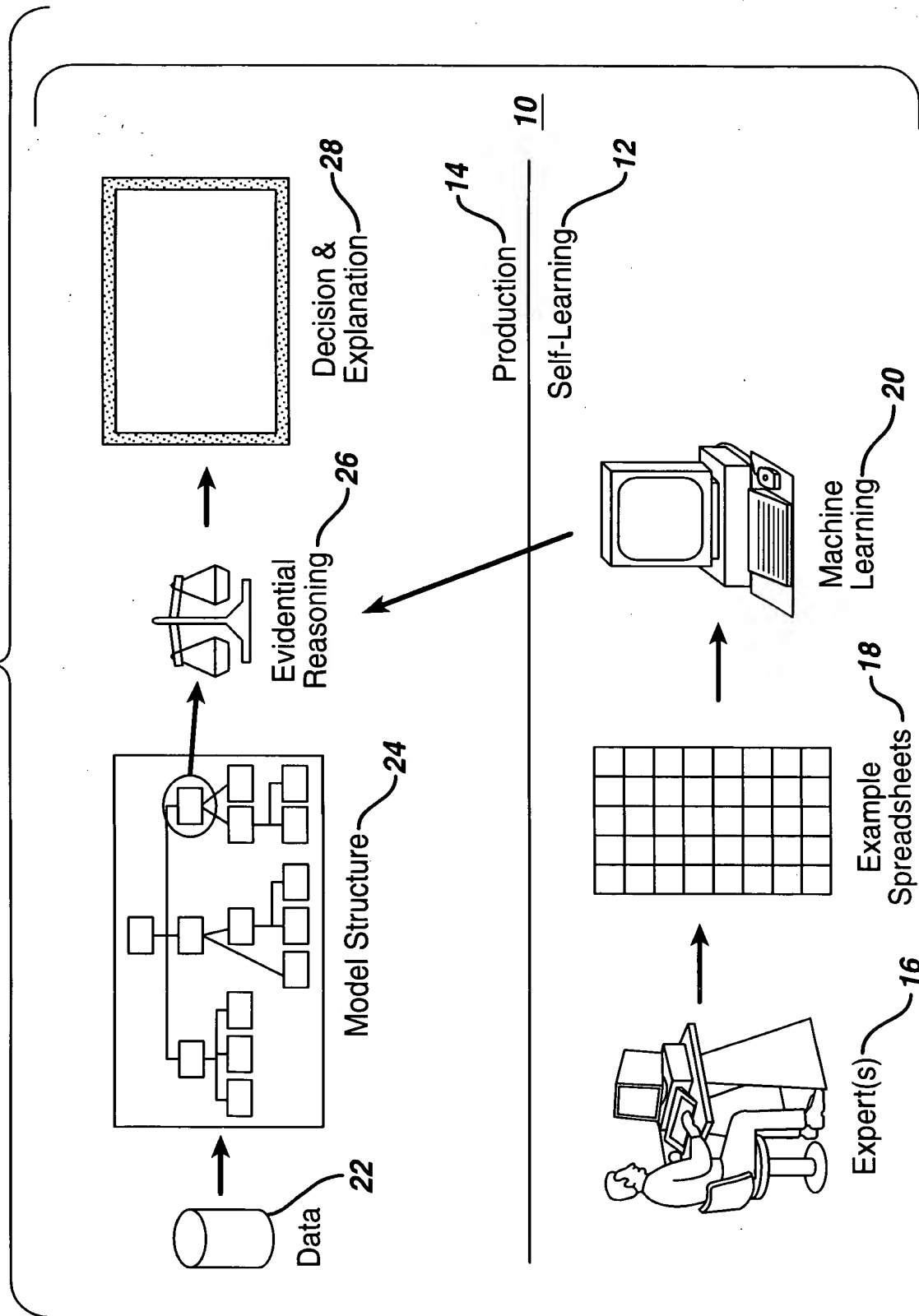


FIG. 2

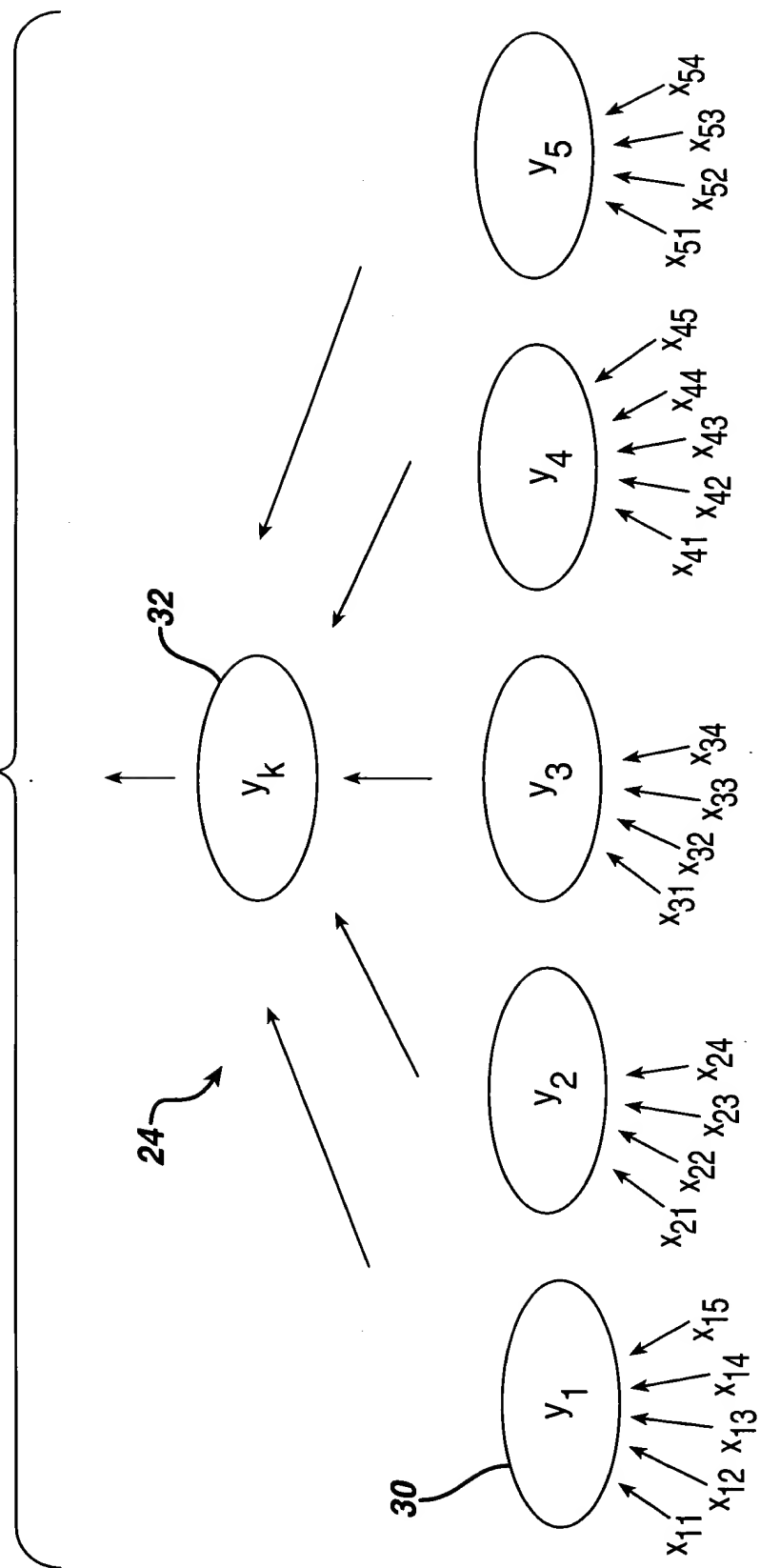
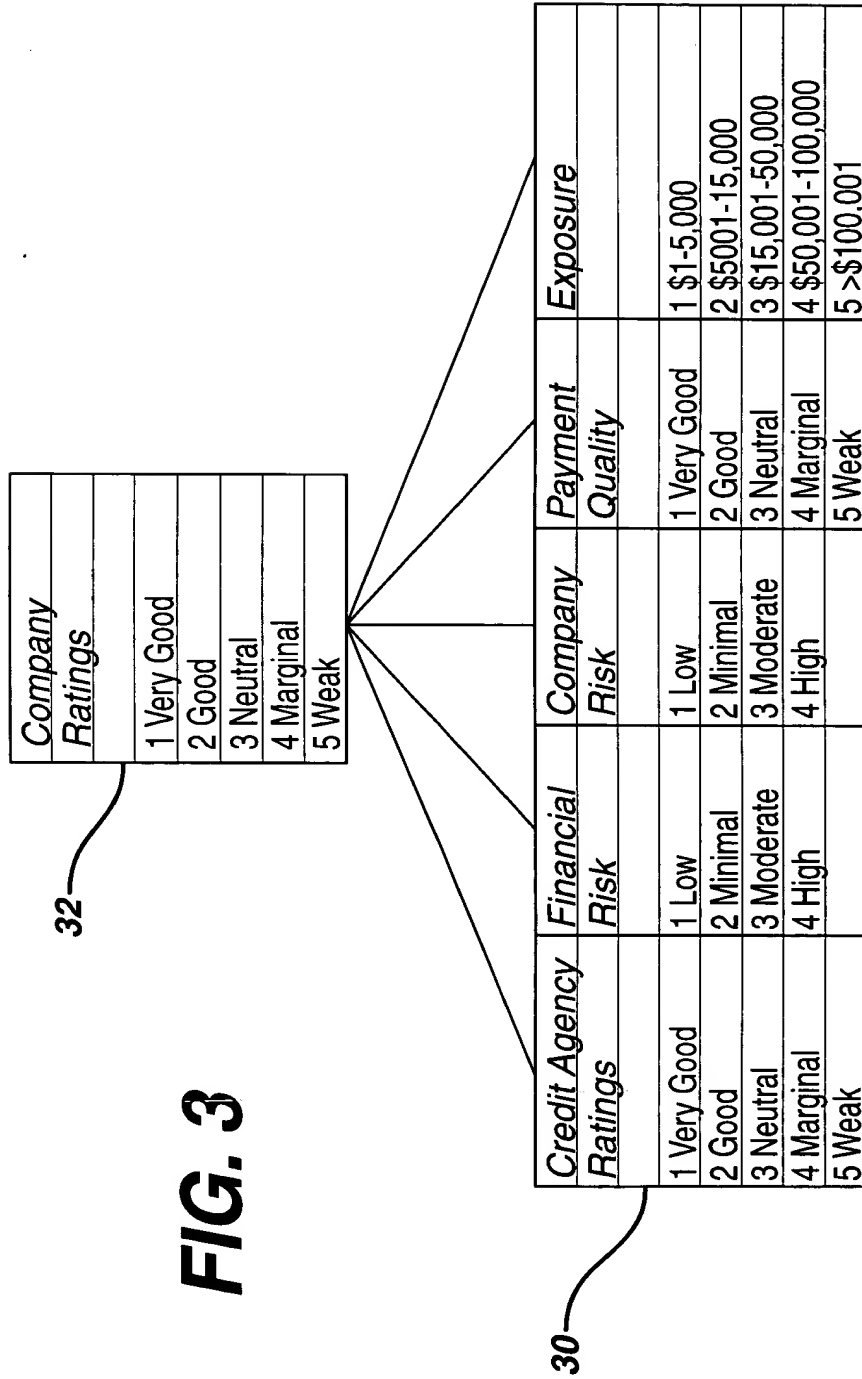


FIG. 3



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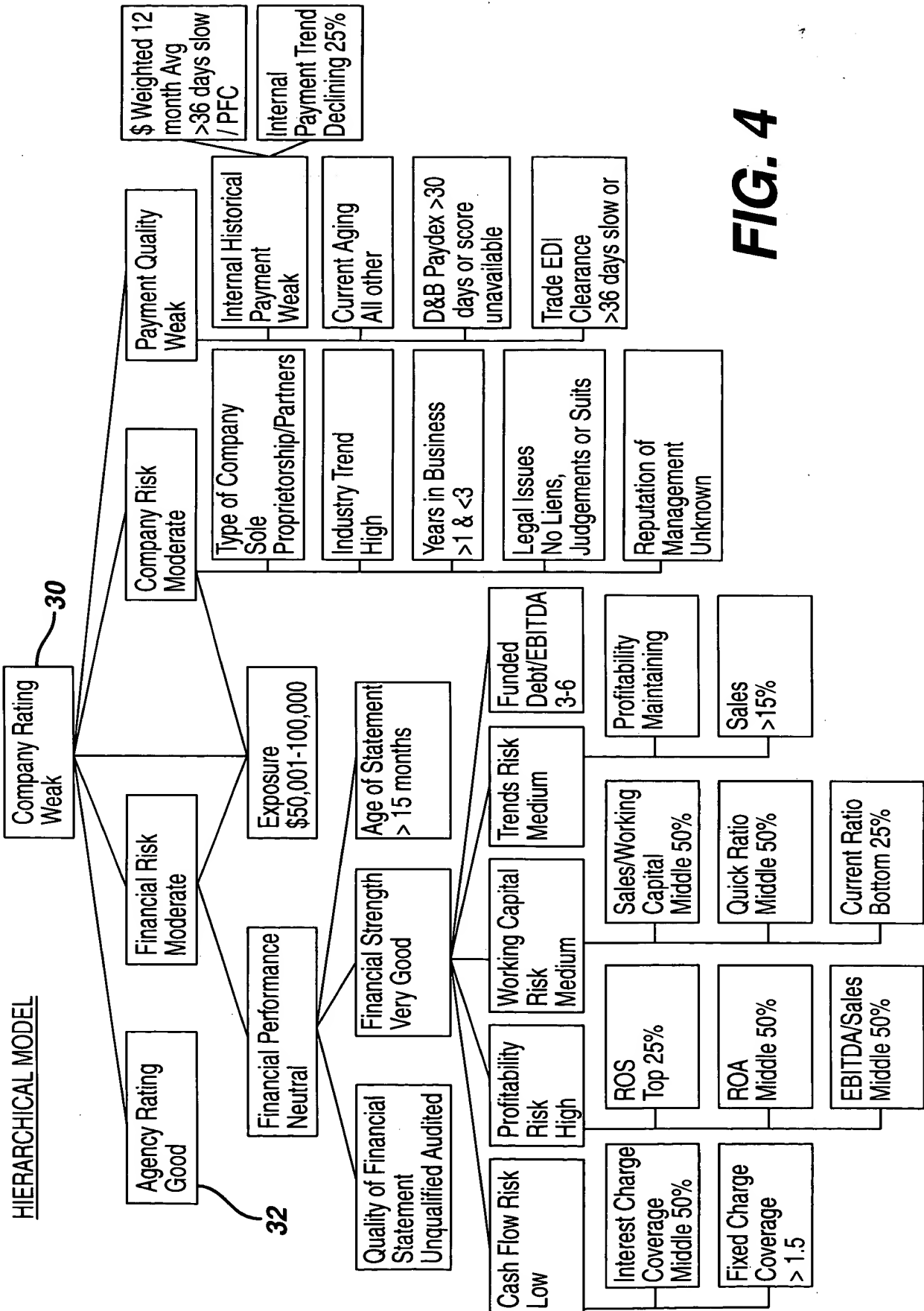


FIG. 4

APPROVED	D. G. FIG.	
BY	CLASS	SUBCLASS
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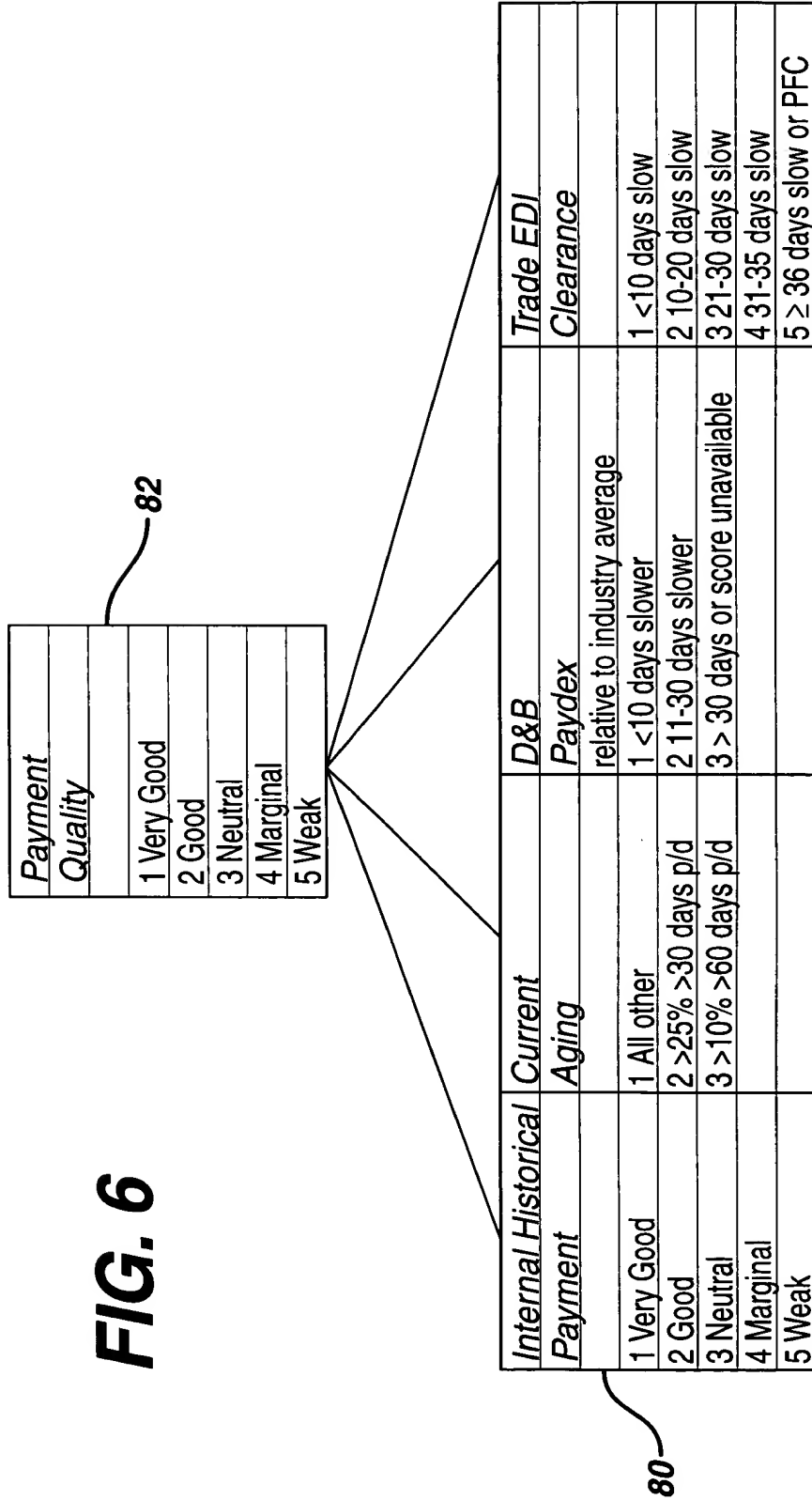
D&B Mapping of Raw Data(e.g., from D&B) for Credit Agency Ratings				
1. Very Good	2. Good	3. Neutral	4. Marginal	5. Weak
5A1 5A2 4A1 4A2 3A1	3A2 2A1 2A2 1A1 1A2 BA1 BA2 CB1 CB2 CC1 DC1	5A3 4A3 3A3 2A3 1A3 BA3 DC2 DD1 EE1 FF1 GG1 HH1	BB3 CB3 CC3 DC3 DD2 EE2 FF2 GG2 HH2 1R2 2R2 NL -- NQ ER1 ER2 ER3 ER4 ER5 ER6 ER7 ER8 ERN	5A4 4A4 3A4 2A4 1A4 BA4 BB4 CB4 CC4 DC4 DD3 DD4 EE3 EE4 FF3 FF4 GG3 GG4 HH3 HH4 1R3 1R4 2R3 2R4

FIG. 5

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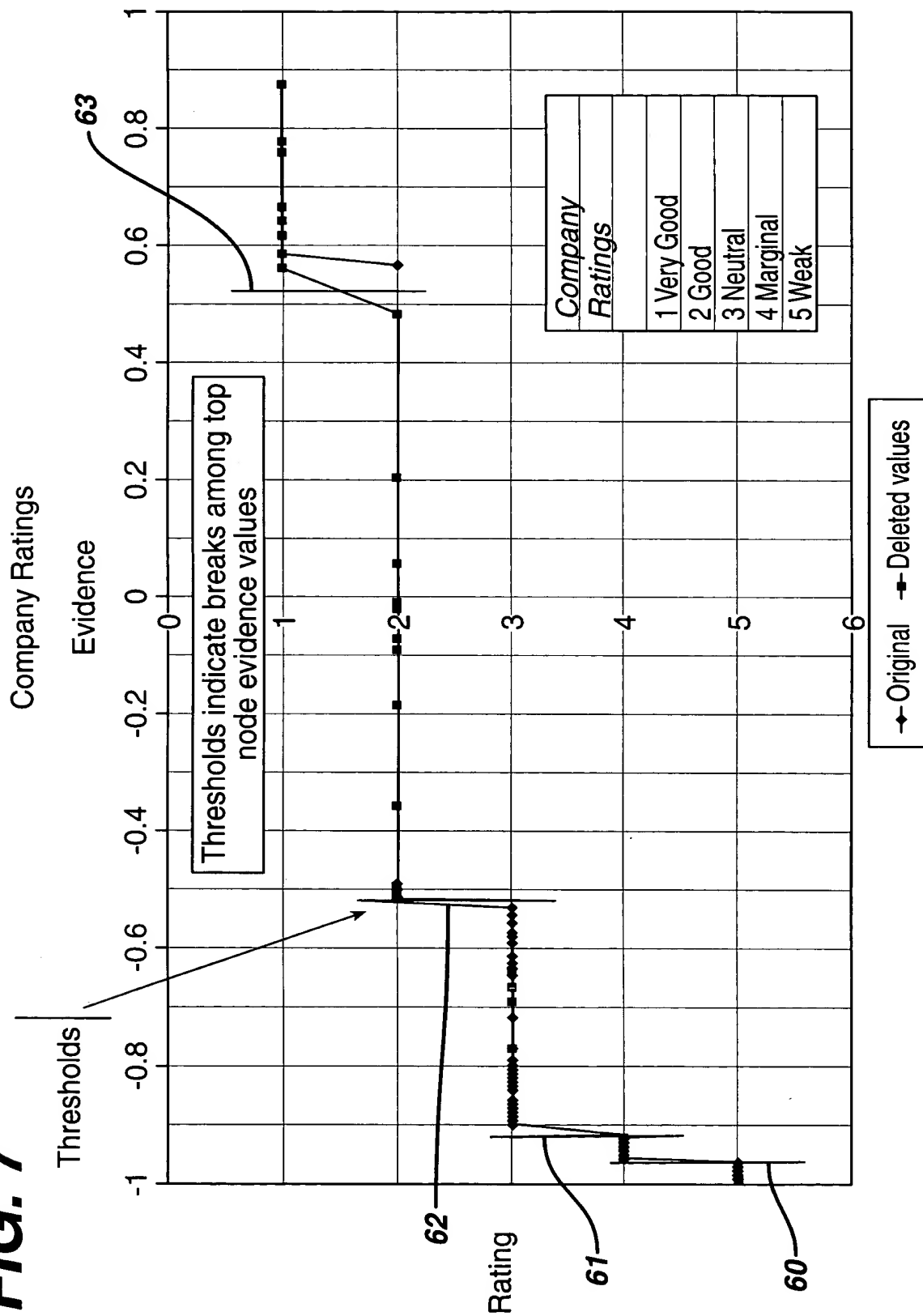
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FIG. 6



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FIG. 7



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Company Rating

Agency Rating	Financial Risk	Company Risk	Payment Quality	Exposure	Company Rating
1 Very Good	1 Low	1 Low	1 Very Good	1 \$1-5,000	1 Very Good
2 Good	2 Minimal	2 Minimal	2 Good	2 \$5,001-15,000	2 Good
3 Neutral	3 Moderate	3 Moderate	3 Neutral	3 \$15,001-50,000	3 Neutral
4 Marginal	4 High	4 High	4 Marginal	4 \$50,001-100,000	4 Marginal
5 Weak			5 Weak	5 >\$100,001	5 Weak

Case	Agency Rating	Financial Risk	Company Risk	Payment Quality	Exposure	Company Rating	Comment
604	2	3	1	1	4	3	
1821	5	3	1	5	1	4	
1567	4	4	3	4	2	5	
1713	5	2	1	3	3	2	
260	1	3	3	2	5	4	
1952	5	4	3	1	2	3	
152	1	2	3	1	2	2	
691	2	3	4	4	1	4	
1659	5	1	3	2	4	3	
588	2	2	4	3	3	3	
1093	3	3	4	4	3	4	
132	1	2	2	2	2	1	
760	2	4	3	2	5	5	
25	1	1	1	5	5	3	
1381	4	2	4	2	1	2	
107	1	2	1	2	2	1	
1156	3	4	3	2	1	2	
1880	5	3	4	1	5	4	
595	2	2	4	4	5	4	
591	2	2	4	4	1	3	
142	1	2	2	4	2	2	
1924	5	4	1	5	4	5	
1364	4	2	3	3	4	3	
646	2	3	2	5	1	5	
1704	5	2	1	1	4	2	
1123	3	4	1	5	3	5	
312	1	4	1	3	2	3	
554	2	2	3	1	4	2	
69	1	1	3	4	4	3	
946	3	2	2	5	1	4	

Create a statistical sample of the possible hypothetical cases
- Expert supplies his opinion or diagnosis

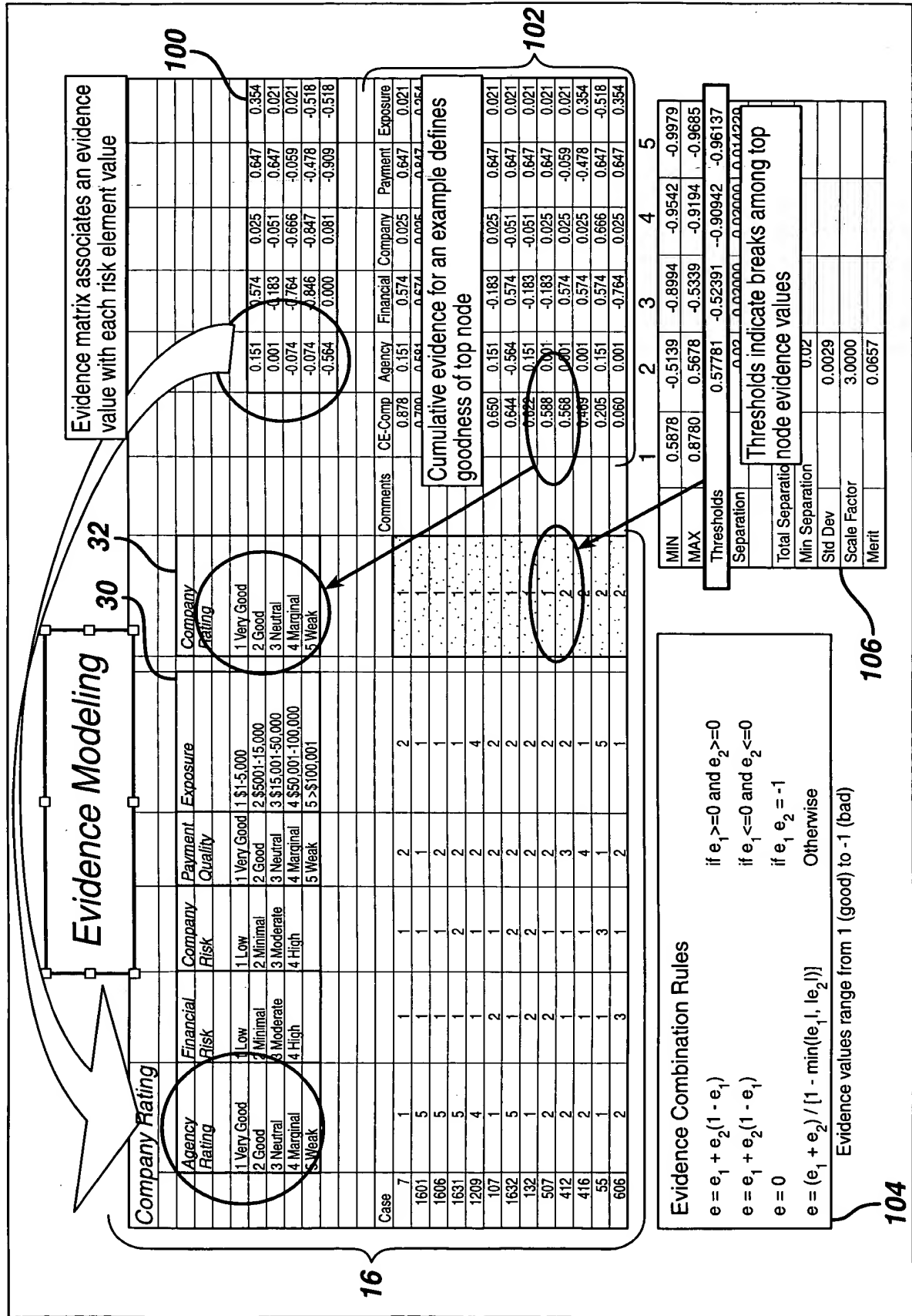
Used as input to machine learning technique

FIG. 8

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FIG. 9



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FIG. 11

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Financial Risk

Financial
Performance

Exposure

Financial
Risk

Comments

1 Very Good

1 \$1-5,000

1 Low

Credit officers thought they
know size of the company(
of net worth) before they co
accurately assess the risk.

2 Good

2 \$5001-15,000

2 Minimal

3 Neutral

3 \$15,001-50,000

3 Moderate

4 Marginal

4 \$50,001-100,000

4 High

5 Unknown

5 >\$100,001

6 Weak

Case

1

1

1

1

6

2

1

1

11

3

1

1

2

1

2

1

7

2

2

1

3

1

3

1

12

3

2

2

8

2

3

2

16

4

1

2

13

3

3

2

21

6

1

2

26

5

1

2

4

1

4

3

17

4

2

2

9

2

4

3

Changed from a 2

18

4

3

3

22

6

2

3

27

5

2

3

5

1

5

3

14

3

4

3

23

6

3

4

28

5

3

4

10

2

5

4

15

3

5

4

Changed from a 3

19

4

4

4

24

6

4

4

29

5

4

4

The approach identifies values that are outside the logic developed for the majority of cases.

In all cases they were changed one "bin" value to conform. Changes were confirmed by experts.

APPROVED	Q.G. FIG.	
BY	CLASS	SUBCLASS
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FIG. 12

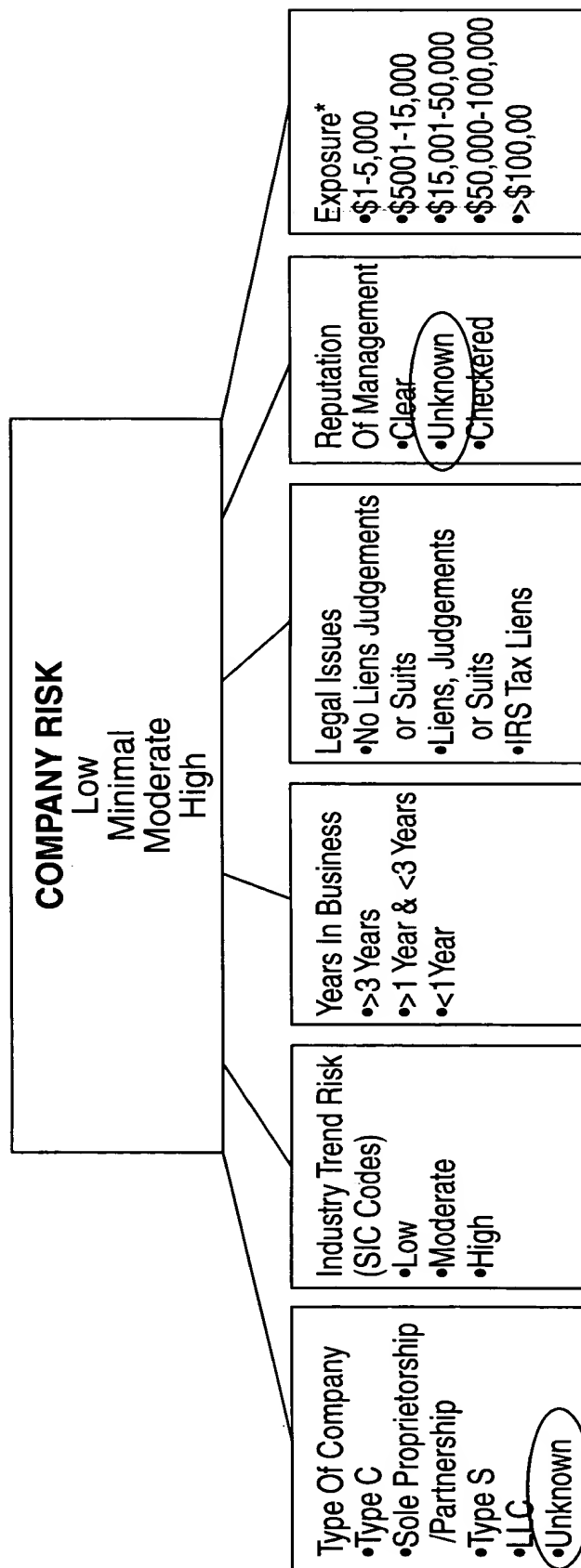


FIG. 13

Inputs

\$ Weighted 12 month Avg	2 11-20 days slow
Internal Payment Trend	2 24% to -24%(or Unknown)
Sales/Working Capital	2 Middle 50%
Quick Ratio	2 Middle 50%
Current ratio	2 Middle 50%
Profitability	# Down > 10%
Sales	4 Declining
ROS	3 Bottom 25%
ROA	3 Bottom 25%
EBITDA/Sales	3 Bottom 25%
Agency Rating	4 Marginal
Exposure	5 > \$100,0001
Type of Company	1 Type C
Industry Trend	1 Low
Years in Business	1 > 3
Legal Issues	1 No Liens, Judgements or Suits
Reputation of Management	3 Checkered
Quality of Financial Statement	1 Unqualified Audited
Age of Statement	1 < 6 months
Funded Debt/EBITDA	3 > 6 or <0
Fixed Charge Coverage	1 > 1.5
Interest Charge Coverage	3 Bottom 25%
Current Aging	1 All other
D&B Paydex	2 11-30 days slower(or Unknown)
Trade EDI Clearance	2 10-20 days slow

Run Model

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☒ Financials Known
☒ Payment Information Known

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Company Rating	Marginal
Net Worth	\$0
Working Capital	\$0
Avg. High Credit	\$11,005
High Credit	\$200,000
Internal High Credit	\$150,000

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Base Credit Line	\$108,852
Multiplier	0.5
House Line	\$54,000

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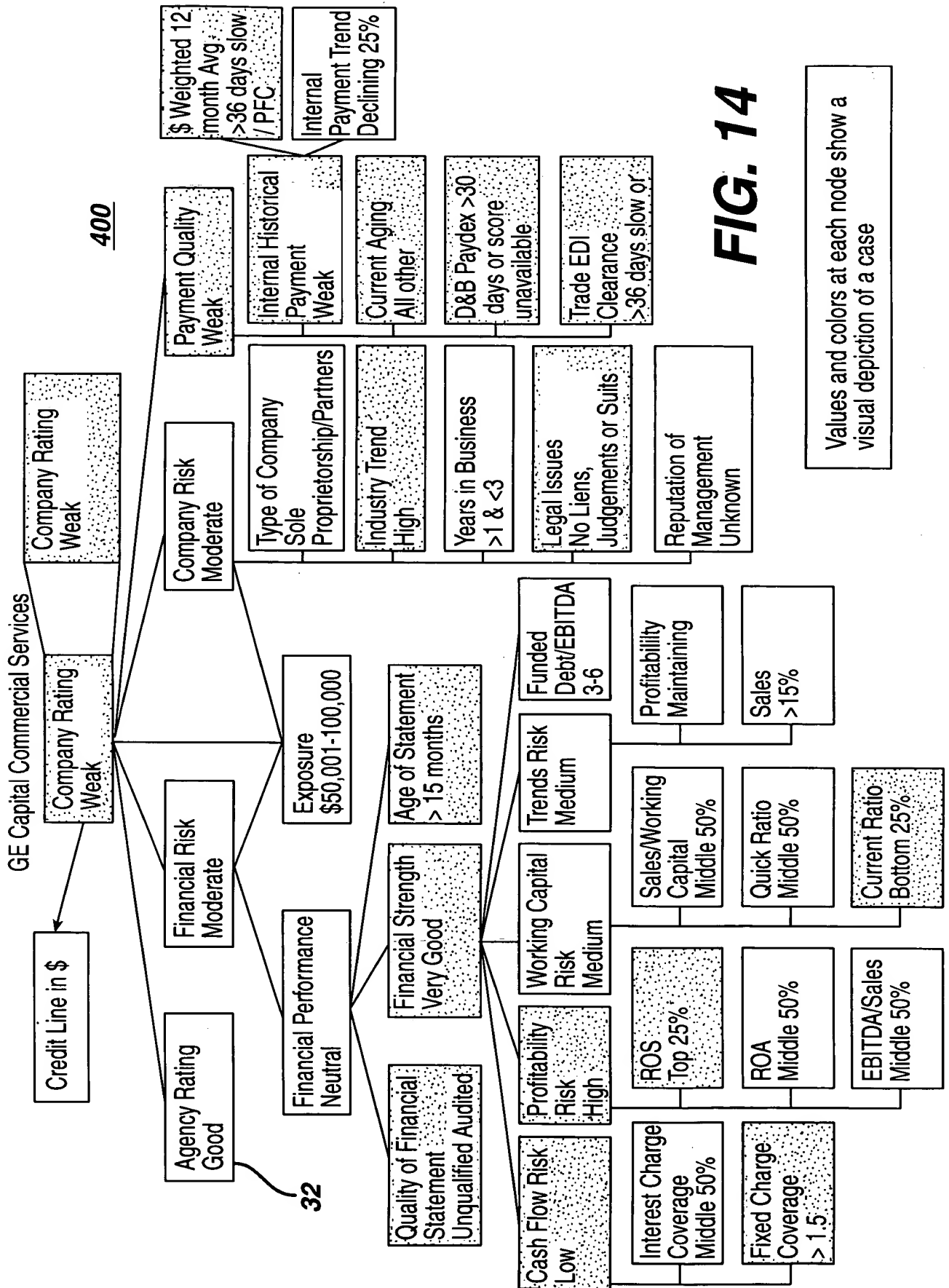


FIG. 15

GE Capital Commercial Service		Test Case 4	
House Line		\$54,000.00	
The Overall Company Rating of:		Marginal	
Was based on:			
An Agency Rating of:		Marginal	
A Financial Risk of:		High	
An Exposure of:		> \$100,0001	
A Company Risk of:		Moderate	
A Payment Quality of:		Good	
The Financial Risk of:		High	
Was based on:			
A Financial Performance of:		Marginal	
An Exposure of:		> \$100,0001	
The Company Risk of:		Moderate	
Was based on:			
A Type of Company of:		Type C	
An Industry Trend of:		Low	
Years in Business of:		>3	
Legal Issues of:		No Liens, Judgements or Suits	
A reputation of management of:		Checkered	
The Payment Quality of:		Good	
Was based on:			
An Internal historical payment of:		Good	
A Current Aging of:		All other	
A D&B Paydex of:		11-30 days slower (or Unknown)	
A Trade EDI of:		10-20 days slow	
The Internal Historical Payment of:		Good	
Was based on:			
A Weighted Monthly Average of:		11-20 days slow	
A Payment Trend of:		24% to -24% (or Unknown)	
The Financial performance of:		Neutral	
Was based on:			
A Quality of Financial Statement of:		Unqualified Audited	
A Financial Strength of:		Very Good	
An Age of Statement of:		15 months	
The Financial Strength of:		Very Good	
Was based on:			
A Cash Flow Risk of:		Low	
A Profitability Risk of:		High	
A Working Capital Risk of:		Medium	
A Trends Risk of:		Medium	
A Funded Debt/EBITA of:		3-6	
The Cash Flow Risk of:		Low	
Was based on:			
An Interest Charge Coverage of:		Middle 50%	
A Fixed Charge Coverage of:		> 1.5	
The Profitability Risk of:		High	
Was based on:			
A ROS of:		Top 25%	
A ROA of:		Middle 50%	
An EBITA/Sales Ratio of:		Middle 50%	
The Working Capital Risk of:		Medium	
Was based on:			
A Sales/Working Capital Ratio of:		Middle 50%	
A Quick ration of:		Middle 50%	
A Current ration of:		Bottom 25%	
The Trends Risk of:		Medium	
Was based on:			
A Profitability of:		Maintaining	
A Sales of:		> 15%	